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UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON
PORTLAND DIVISION

FEREYDUN TABAIAN and
AHMAD ASHRAFZADEH,

Plaintiffs,

v.

INTEL CORPORATION,

Defendant.

Civil Action No.: 3:18-cv-0326-HZ

**PLAINTIFFS' OPENING
CLAIM CONSTRUCTION BRIEF**

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TABLE OF ABBREVIATIONS

Abbreviation	Explanation
944, xx:yy	U.S. Patent No. 7,027,944 (“the ’944 Patent”) (filed as ECF No. 1-1), column no. xx, line no. yy
DeRouin Decl. (Ex. A)	U.S. Provisional Patent Application No. 60/484,105 (filed with this brief as Ex. A to DeRouin Declaration)
DeRouin Decl. (Ex. B)	Originally Filed Claims for U.S. Patent Application No. 10/878,477 (filed with this brief as Ex. B to DeRouin Declaration)
VS Decl. (ECF 115-4)	Declaration of Vivek Subramanian, Ph.D., February 20, 2019 (filed as ECF No. 115-4)
Melvin Decl. (ECF 115-5)	Declaration of Stephen W. Melvin, Ph.D., February 21, 2019 (filed as ECF No. 115-5)
Melvin Decl. (ECF 115-6)	Declaration of Stephen W. Melvin, Ph.D., March 13, 2019 (filed as ECF No. 115-6)

I. INTRODUCTION

Plaintiffs’ proposed constructions are consistent with the broad claim language and the variety of embodiments and applications of circuit-specific calibration disclosed in U.S. Patent No. 7,027,944 (“the ’944 Patent”), including the provisional application incorporated by reference.

In contrast, Intel’s proposed constructions attempt to improperly import limitations from the specification, to exclude embodiments covered by the broad claim language, and to add limitations that are inconsistent with the claims and intrinsic evidence. *See Cont’l Circuits LLC v. Intel Corp.*, 915 F.3d 788, 799-800 (Fed. Cir. 2019) (holding that district court erred by accepting Intel’s construction that improperly limited claim terms to a preferred embodiment).

II. TECHNOLOGY OVERVIEW

The ’944 Patent discloses a programmable calibration circuit for a power supply that employs a regulator circuit and a calibration control circuit. The calibration control circuit includes an interface with nonvolatile memory (which stores calibration data), a controller, sense outputs, droop outputs, load voltage input and temperature input.

The ’944 Patent recognized that existing voltage regulator circuits suffered from errors due to manufacturing variations, temperature changes, load requirements, and other operating conditions. *See* 944, 1:54-2:4. The ’944 Patent describes using calibration to correct some of those errors in voltage regulator circuits. In this context, calibration refers to the process by which a specific circuit is placed under known conditions, and data (“calibration data”) is generated for use in correcting errors in the voltage regulator circuits. Embodiments of the invention disclosed in the ’944 Patent describe generating calibration data based in part on operating a circuit at one or more known temperatures and under other known operating conditions, such as a known load, and

using the calibration data to adjust droop outputs and sense outputs associated with a voltage error feedback loop and a current sense feedback loop of the regulator circuit.

The '944 Patent, including the provisional application incorporated by reference, discloses embodiments for regulating power using circuit-specific calibration data. Some, but not all embodiments, calibrate a power supply system that includes a droop function. For example, figure 1 of the '944 Patent discloses a multiphase voltage regulator that includes a droop function. In figure 1, as in other embodiments that include a droop function, the calibration data is not used to implement the droop function itself. Rather, the calibration data, and outputs based on the calibration data, correct for errors in the voltage regulator, such as errors caused by manufacturing defects or temperature changes. No embodiment described in the '944 Patent implements a droop function by using the calibration data, droop outputs, or sense outputs. In all embodiments disclosed, the sense and droop outputs merely adjust a voltage or a current feedback loop in a voltage regulator with a droop function.

Similarly, some, but not all, embodiments calibrate a voltage regulator with multiple phases. For example, figure 1 of the '944 Patent shows a voltage regulator with two phases. In embodiments with multiphase voltage regulators, the sense outputs may balance phase currents to a load. For example, the calibration control circuit may use calibration data to adjust the current feedback loop of each phase via the sense output to compensate for the different manufacturing variations in each phase. However, embodiments of the '944 Patent expressly cover "single phase" voltage regulators, as recited in dependent claim 3.

The relevant intrinsic record for the '944 Patent includes, primarily, the '944 Patent's specification as published, the provisional application incorporated by reference (944, 1:8-11), and the originally filed claims (DeRouin Decl. (Ex. B)), some of which were cancelled during

prosecution and added to a separate application in response to a non-final Patent Office rejection. The original claims are as much a part of the '944 Patent's specification as the rest of the published patent, and for claim construction purposes can be helpful in understanding specific embodiments of the invention and in construing the asserted claims. *See* 35 U.S.C. §§ 111(a)(2) and 112(b); *Crown Packaging Tech., Inc. v. Ball Metal Beverage Container Corp.*, 635 F.3d 1373, 1380-81 (Fed. Cir. 2011) ("Original claims are part of the specification . . . Crown's original claims clearly show that the applicants recognized and were claiming an improvement in metal usage . . . without any additional limitation of narrowing the width of the reinforcing bead These claims show, as . . . many original claims do, that the applicants had in mind the invention as claimed.").

III. LEGAL PRINCIPLES FOR CLAIM CONSTRUCTION

Broad claim terms should be construed broadly, and not limited to one or more preferred embodiments. *Cont'l Circuits LLC*, 915 F.3d at 799-800 (district court erred by accepting Intel's construction that improperly limited claim terms to a preferred embodiment); *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1366 (Fed. Cir. 2012) ("We do not read limitations from the specification into claims; we do not redefine words."); *Woods v. DeAngelo Marine Exhaust, Inc.*, 692 F.3d 1272, 1283 (Fed. Cir. 2012) ("The specification need not describe every embodiment of the claimed invention and the claims should not be confined to the disclosed embodiments—even when the specification discloses only one embodiment.") (citations omitted).

Claim terms should be construed broadly where the patent uses broad terms and does not expressly limit their scope. *Woods*, 692 F.3d at 1283 ("[c]laim terms are properly construed to include limitations not otherwise inherent in the term only when a patentee sets out a definition and acts as his own lexicographer, or when the patentee disavows the full scope of a claim term either in the specification or during prosecution.") (internal quotation marks omitted); *Thorner*,

669 F.3d at 1367 (“The patentee is free to choose a broad term and expect to obtain the full scope of its plain and ordinary meaning unless the patentee explicitly redefines the term or disavows its full scope.”). “A claim construction that excludes a preferred embodiment is ‘rarely, if ever, correct.’” *Kaneka Corp. v. Xiamen Kingdomway Grp. Co.*, 790 F.3d 1298, 1304 (Fed. Cir. 2015) (citing *MBO Labs., Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 1333 (Fed. Cir. 2007)).

“‘Claim construction’ is the judicial statement of what is and is not covered by the technical terms and other words of the claims.” *Netword, LLC v. Centraal Corp.*, 242 F.3d 1347, 1352 (Fed. Cir. 2001). Claim terms should be given their ordinary meaning as understood by “a person of ordinary skill in the art” (“POSITA”), subject to their usage and definitions in the patent. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). When construing claims, courts look primarily to the intrinsic evidence: the claim language, specification, and prosecution history. *Id.* at 1313-17. The specification is “usually” “dispositive” and “the single best guide to the meaning of a disputed term.” *Id.* at 1315; *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 653 F.3d 1296, 1305 (Fed. Cir. 2011) (“Claim language must always be read in view of the written description.”) (citation omitted). “Extrinsic evidence,” including expert testimony and dictionaries, “is less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” *Phillips*, 415 F.3d at 1317. In fact, a “court should discount any expert testimony ‘that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent.’” *Id.* at 1318.

IV. A PERSON OF ORDINARY SKILL IN THE ART

The parties agree that a person of ordinary skill in the art at the time of the invention (“POSITA”) would have a Bachelor of Science degree in electrical engineering and two years of graduate education or work experience. Melvin Decl. (ECF 115-5), ¶ 10; VS Decl. (ECF 115-4), ¶ 21. However, the parties disagree as to the type of graduate education and/or work experience

that is necessary. *Id.* A POSITA may have analog and/or digital circuit design experience, including the use of voltage regulation components and systems. Melvin Decl. (ECF 115-5), ¶ 10. Intel, however, contends that a POSITA must have graduate work or work experience in “power regulation circuit design, or equivalent experience.” VS Decl. (ECF 115-4), ¶ 21. Although Plaintiffs’ description of a POSITA should be adopted,¹ the parties’ dispute as to the level of skill in the art that is required of a POSITA has no bearing on the constructions adopted by the Court.

V. DISPUTED TERMS AND CONSTRUCTIONS

A. “droop output(s)”

Claim Term To Be Construed	Plaintiffs’ Proposed Construction	Intel’s Proposed Construction
“droop output(s)”	Outputs of the calibration control circuit used to adjust voltage in circuitry, in a system that includes a droop function that can lower output voltage based on output current.	Outputs of the calibration control circuit used to adjust the droop function (i.e., the function that automatically lowers the output voltage based on the output current).

1. Plaintiffs’ Construction is Consistent with the Intrinsic Evidence

Droop outputs² are used to meet power and voltage specifications of a load, such as by adjusting voltage to the load. *See* 944, 5:61-63 (“droop and sense settings may be adjusted until the load voltage meets the load’s specification.”). “This invention advantageously provides circuits and methods to *properly power a processor or IC chip* according to the unique power specifications of the processor or chip.” 944, Abstract. For example, the ’944 Patent discusses that

¹ Despite providing numerous paragraphs and a long list of publications and patents, Intel’s expert never discloses his own experience in what Intel describes as the “basics of power regulation circuitry.” *See* VS Decl. (ECF 115-4), ¶¶ 6-16; Ex. A. It remains unclear whether Intel’s expert even satisfies Intel’s definition of a POSITA.

² The ’944 Patent uses the term “outputs” to mean both the circuitry involved in communicating the signal as well as the signal itself. *See* Melvin Decl. (ECF 115-5), ¶ 16.

output voltage may be adjusted to meet the voltage requirement set by the droop function (note, this is different from adjusting voltage requirement set by the droop function itself). DeRouin Decl. (Ex. A), p. 2 (“Then output voltage at the second temperature is forced to match the voltage at the first temperature. This coefficient can also be stored and reapplied at power up to provide temperature independent droop setting.”).³

The '944 Patent discloses that there are many ways to implement and adjust a droop function that can lower output voltage based on output current. “For instance, one may limit the DC gain of the error amplifier in the current mode power supply, lower the reference by a ratio related to the overall current, increase the feedback based on the ratio of the overall current, or lower the error based on the ratio of overall current.” 944, 1:36-51. Consistently, the '944 Patent also disclosed a number of ways to use droop outputs to adjust output voltage in a regulator circuit. Referring to Fig. 1, an “adjustable droop amplifier 180 may be used to adjust the droop loss across the current sense circuit 140,” which “may be used to drive an error circuit.” 944, 8:64-67. In another embodiment, the '944 Patent recognized that “adjusting the droop amplifier 180 may be equivalent to adjusting the reference voltage.” 944, 9:50-52. The '944 Patent even contemplated setting droop directly. *See, e.g.*, DeRouin Decl. (Ex. A), p. 2 (“The adjustment coefficient is then calculated and stored resulting in the desired droop.”). Consistent with all embodiments, the calibration control circuit uses droop outputs to adjust voltage in the regulator circuitry.

³ *See also* DeRouin Decl. (Ex. A), p. 6 (“Since the sensing current sensing elements usually have a positive temperature coefficient, the output is usually set to lower than required. By using the counter and the DAC, the gain of the temperature sensor is adjusted. This adjusts the gain of the droop amplifier resulting in the same voltage at both temperatures.”).

2. Intel's Construction is Improperly Limiting

Intel's proposed construction should be rejected because the intrinsic evidence is clear that droop outputs do not necessarily adjust a droop function. They may, for example, adjust the reference voltage. The parties agree that droop outputs are used in a system that includes a droop function (which can lower output voltage based on output current). However, the droop function is not recited in the asserted claims, and the droop function was not included in any of the originally filed claims. In fact, the droop function is minimally discussed in the specification. The only mention of the droop function is in the Background of the Invention. *Cf.*, 944, 1:35-55 (noting that a droop function is used to “automatically lower the output voltage based on the output current.”). Given that the asserted claims of the '944 Patent were intentionally drafted without reference to the droop function, droop outputs should be construed to cover the full breadth of the claims. The claims must be read in the context of the entire specification. Limitations from one particular embodiment must not be used to unnecessarily narrow the claims. *See Phillips*, 415 F.3d at 1323 (“For instance, although the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments.”).

Further, although a droop function *may be adjusted*, it is improper to *require* that the droop function be adjusted. As discussed above, the '944 Patent is clear that only voltage must be adjusted. 944, 9:50-52 (“adjusting the droop amplifier 180 may be equivalent to adjusting the reference voltage.”). In another embodiment, referring to Fig. 1, the output from calibration control circuit 190 to the adjustable droop amplifier 180 adjusts voltage in the regulator circuit, not adjusting the droop function itself. 944, 8:64-9:11 (discussing, among other things, generating the error voltage value). Instead, the function of automatically lowering the output voltage based on the output current is implemented by the adjustable droop amplifier 180 in conjunction with error

circuit 170. 944, 9:7-9 (“The output of the error amplifier 175 drives one port of each pulse width modulator 160 to compensate for the droop loss.”). It would be improper to read out these preferred embodiments. *Kaneka Corp.*, 790 F.3d at 1304 (“A claim construction that excludes a preferred embodiment is ‘rarely, if ever, correct.’”) (citing *MBO Labs.*, 474 F.3d at 1333). Further, in many implementations, the droop function is “set by the microprocessor manufacturers” (DeRouin Decl. (Ex. A), p. 1), therefore the function itself may not be adjusted. By requiring that the droop function be adjusted, Intel attempts to improperly limit the asserted claims and to read out the preferred embodiments of the disclosed invention.

Finally, in support of its proposed construction, Intel appears to be relying on unnecessary extrinsic evidence by way of expert and deposition testimony to contradict the clear intrinsic evidence. *See Phillips*, 415 F.3d at 1318 (“a court should discount any expert testimony ‘that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history . . .’”). For example, without a relevant citation, Dr. Subramanian declared that “[t]he ’944 patent describes the ‘droop outputs’ as outputs from the calibration control circuit used to adjust the droop function.” VS Decl. (ECF 115-4), ¶ 110, Ex. D. Dr. Subramanian appears to draw this inference based on, among other things, inconclusive and improper deposition testimony of the Inventors. *Id.* at 113, 115, Ex. D (citing to deposition transcripts of Ali Hejazi and Hamed Sadati). Dr. Subramanian fails to recognize that subjective Inventor testimony should not be relied upon during claim construction. *See, e.g., Howmedica Osteonics Corp. v. Wright Med. Tech., Inc.*, 540 F.3d 1337, 1347 (Fed. Cir. 2008) (“[I]nventor testimony as to the inventor’s subjective intent is irrelevant to the issue of claim construction.”); *ArcelorMittal France v. AK Steel Corp.*, 700 F.3d 1314, 1321-22 (Fed. Cir. 2012) (“[t]estimony regarding an inventor’s subjective understanding of patent terminology is irrelevant to claim

construction . . .”). However, as discussed above, the ’944 Patent describes and claims droop outputs as adjusting voltage in a regulator circuit, and it would be improper to limit droop outputs as Intel proposes.

3. The Specification Fully Supports Multiple Droop Outputs

The specification and other intrinsic evidence fully supports droop outputs as recited in asserted claim 1. As an initial matter, the ’944 Patent affirmatively states that, when used within their disclosure, “the singular forms ‘a,’ ‘an,’ and ‘the’ include the plural reference unless the context clearly dictates otherwise.” 944, 4:54-58. It necessarily follows that when the ’944 Patent used the singular form of droop output, the disclosure unambiguously supports the plural form of droop outputs. Nothing in the disclosure clearly dictates otherwise, thus the Inventors were clearly in possession of the subject matter disclosed in claim 1. *Compare* 944, claim 1 (discussing multiple droop output signals), *with* 944, claim 11 (discussing droop output circuitry).

Further, based on the intrinsic evidence, droop outputs refers to both the circuitry involved in communicating signals to the regulator circuit as well as the signals themselves. For example, a single circuit for outputting a plurality of droop output signals, as shown in the embodiment of Fig. 1, supports multiple droop outputs. *See, e.g.*, 944, 9:25-27, 9:36-40 (showing droop output 550 in Fig. 2 for communicating multiple signals). *See also* Melvin Decl. (ECF 115-5), ¶ 17. Likewise, claim 11 further recites that a “droop output” may include a digital to analog converter with registered input and an amplifier buffer, showing that the droop output refers to the circuitry that communicates that signal to the error feedback loop. *See* 944, Claim 11, Fig. 1. The intrinsic evidence is also consistent with how a POSITA would understand outputs. *See also* Melvin Decl. (ECF 115-5), ¶ 16; Ex. 3 (dictionary definition of “output” includes, among other things, “[a] port or set of terminals at which a system or component delivers useful energy or a useful signal. *Also*

the energy or signal delivered.”) (emphasis added). The ’944 Patent also included embodiments in which the sense and droop outputs are continuously adjusted “across each phase,” for example, providing multiple droop outputs with one output for each phase. *See, e.g.*, 944, 4:31-35, 8:24-33, 5:51-53. Thus, a POSITA would understand also that when the singular form of droop output is used in the specification, that the plural is implied. *See, e.g.*, 944, 4:48-60. Accordingly, the specification and other intrinsic evidence fully supports multiple droop outputs.

B. “sense output(s)”

Claim Term To Be Construed	Plaintiffs’ Proposed Construction	Intel’s Proposed Construction
“sense output(s)”	Outputs of the calibration control circuit used to adjust the current feedback loop.	Outputs of the calibration control circuit used to adjust the circuitry that measures current.

1. Plaintiffs’ Construction is Consistent with the Intrinsic Evidence

Consistent with the intrinsic evidence, sense outputs are outputs of the calibration control circuit used to adjust the current feedback loop of the regulator circuit. The regulator circuit includes a current feedback loop. Only a portion of that loop measures current. Other portions use the current to maintain a stable voltage. For example, in one embodiment, a “current sense circuit measures the current of the output FETs and feeds back to the register via the adjustable sense amplifier and the pulse width modulator.” 944, 3:29-32. Referring to Fig. 1, “[t]he output of the adjustable sense amplifier 150 drives the current sense input of the pulse width modulator (PWM) 160 to generate the proper pulse width signal to the power output FET 130 to regulate the output power.” 944, 8:59-62. *See also* 944, 8:54-58 (“By adjusting the feedback gain of the adjustable sense amplifier 150, variations in the current sense circuit of each phase can be balanced to equalize the load seen by each phase of a multi-phase regulator.”). By using an adjustable sense amplifier, this embodiment allows the calibration control circuit to adjust the current feedback loop

as a whole. *See* Melvin Decl. (ECF 115-6), ¶ 24. In other implementations, either the PWM or the current sense circuit could be adjusted instead of using an adjustable sense amplifier. *See, e.g.*, DeRouin Decl. (Ex. A), p. 2 (“The sensing circuit disclosed is digitally calibrated to compensate for the inaccuracies of the sensing elements.”). Consistent with all embodiments, the calibration control circuit uses sense outputs to adjust the current feedback loop.

2. Intel’s Construction is Inconsistent with the Intrinsic Evidence

Intel’s proposed construction should be rejected because the intrinsic evidence is clear that sense outputs do not necessarily adjust the circuitry that measures current. As discussed above with respect to Fig. 1, an adjustable sense amplifier receives sense outputs from the calibration control circuit to adjust the current feedback loop. *See* 944, 8:59-62. In this embodiment, the current sense circuit is *not* adjusted, as the current sense circuit is separate from the current sense amplifier. *See* 944, Fig. 1. By attempting to limit sense outputs to require adjusting the circuitry that measures current, Intel’s proposed construction reads out the preferred embodiments. *Kaneka Corp.*, 790 F.3d at 1304 (“A claim construction that excludes a preferred embodiment is ‘rarely, if ever, correct.’”) (citation omitted). Other intrinsic evidence further warrants rejecting Intel’s proposed construction. For example, originally filed claim 26, which depends from claim 1, recites the current sense circuit and the adjustable sense amplifier. DeRouin Decl. (Ex. B), Claim 26. As such, claim 1 was not drafted to be narrowly construed to implementations where the current sense circuit is directly adjusted. When viewed as a whole, the intrinsic evidence shows that sense outputs are not limited to adjusting the circuitry that measures current. Instead, sense outputs are outputs of the calibration control circuit used to adjust the current feedback loop.

C. “calibration data”

Claim Term To Be Construed	Plaintiffs’ Proposed Construction	Intel’s Proposed Construction
“calibration data”	Data used in determining droop output and sense output settings, based in part on operating a circuit under known conditions.	Data that relates the sense outputs and droop outputs with temperature and is used to adjust those outputs as the temperature varies.

1. Plaintiffs’ Construction is Consistent with the Intrinsic Evidence

Consistent with the intrinsic evidence, calibration data is data used by the calibration control circuit to determine droop output and sense output settings. Calibration data may be used to calibrate a regulator circuit. To generate calibration data for the regulator circuit, the regulator circuit is tested under known conditions. This calibration data is subsequently used to help the load voltage meet operating specifications, for example by compensating for errors due to manufacturing variations in the circuit. *See, e.g.*, 944, 5:54-6:9 (“The load voltage and the temperature may be monitored while the droop and sense settings may be adjusted until the load voltage meets the loads specification.”); 944, 7:36-59 (“These methods may begin with estimating the anticipated operation specifications of circuit’s load,” then “the regulator and the calibration control circuit may be placed in a circuit with a load” to calibrate the regulator circuit.). Thus, a POSITA would have understood calibration data to be based in part on operating a circuit under known conditions. *See* Melvin Decl. (ECF 115-5), ¶ 30.

The intrinsic evidence supports generating calibration data based on known operating conditions, such as a known load, a known temperature, and anticipated operation specifications. *See, e.g.*, 944, 5:54-6:9, 7:36-59. For example, the known load “may be any type of circuit requiring application specific power.” 944, 5:56-58. Although one known operating condition may be temperature, a known temperature is not required to generate calibration data. For example, the

'944 Patent includes embodiments where temperature data is not used in generating calibration data. *See, e.g.*, DeRouin Decl. (Ex. A), p. 4 (“By using a known load and a known reference, the inductor current can be predicted. The calibration circuit can then use this information and the sensed current to adjust the gain of the sensing circuit to match the measured current of the calculated results.”); 944, 5:25-30 (“Thus, at power up, the current sensing mechanism is adjusted by the calibration parameters such that the overall gain of the sensing mechanism in all phases may be matched, and the total current across all phases is shared equally regardless of the temperature or the load.”); 944, 2:40-43 (“The data stored in the nonvolatile memory for the droop outputs and sense outputs *may be based* on the load voltage input and *the temperature input*.”) (emphasis added).⁴ Thus, the intrinsic evidence is clear that some calibration data may be generated without necessarily taking into account temperature. Accordingly, calibration data should be construed as data used in determining droop output and sense output settings, based in part on operating a circuit under known conditions.

2. Intel’s Construction is Improperly Limiting

Intel’s proposed construction should be rejected because calibration data does not necessarily have to relate both sense and droop outputs with temperature. Intel attempts to limit the breadth of claim 1 by incorporating limitations from the specification. This is improper. *See Kara Tech. Inc. v. Stamps.com Inc.*, 582 F.3d 1341, 1348-49 (Fed. Cir. 2009) (reversing a narrow construction and holding that “[t]he patentee is entitled to the full scope of his claims, and we will not limit him to his preferred embodiment or import a limitation from the specification into the claims.”) (quoting *Phillips*, 415 F.3d at 1323).

⁴ *See also* 944, 3:56-59 (discussing “estimating the anticipated operation specifications of circuit's load” and storing output data “based on this estimate.”).

For example, had the claimed invention required that temperature be used in generating all calibration data, the asserted claims would have recited that requirement. Other original claims did, but the asserted claims do not. *Cf.*, DeRouin Decl. (Ex. B), Claim 47 (“creating output data that relates temperature input with sense outputs and temperature data with droop output; and storing the created output in nonvolatile memory”), Claim 64 (“referencing memory for stored calibration data associated with said temperature data”), Claim 49 (“The method of claim 47 wherein the method is repeated at different operating temperatures.”). *See also SRI Int’l v. Matsushita Elec. Corp. of America*, 775 F.2d 1107, 1122 (Fed. Cir. 1985) (en banc) (“It is settled law that when a patent claim does not contain a certain limitation and another claim does, that limitation cannot be read into the former claim in determining either validity or infringement.”). Instead, asserted claim 1 was purposefully drafted without this requirement, which is affirmatively cited in dependent claim 9. *Compare* 944, Claim 1 (“said nonvolatile memory stores calibration data”), *with* DeRouin Decl. (Ex. B), Claim 9 (“The circuit of claim 1 where said nonvolatile memory stores data for said droop outputs and said sense outputs where said data **is based on** said load voltage input and **said temperature input.**”) (emphasis added).⁵ *See also Phillips*, 415 F.3d at 1315 (“[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.”).

Likewise, ’944 Patent includes embodiments where calibration data is not necessarily temperature dependent, such as when the calibration data is first created as a set of estimated output data that is stored for later modification or refinement by the calibration control circuit. *See* 944, 7:38-41 (“These methods may begin with estimating the anticipated operation specifications of

⁵ The issued claim is the same. *See* 944, Claim 9 (“The circuit of claim 1 where said nonvolatile memory stores data for said droop outputs and said sense outputs where said data **is based on** said load voltage input and **said temperature input.**”) (emphasis added).

circuit's load, creating a set of output data based on this estimate, and taking the output data and storing it in nonvolatile memory.”). Embodiments of the '944 Patent that do refer to temperature data often use permissive language, indicating that using temperature is often optional or may not be necessary. *See* 944, 2:40-43 (“The data stored in the nonvolatile memory for the droop outputs and sense outputs *may be based* on the load voltage input and the temperature input.”) (emphasis added); 944, 4:29-31 (“The controller then, references the memory for stored calibration data that *that may be associated* with the with the sampled temperature.”) (emphasis added).

Finally, claim 1 even recites calibrating calibration data stored in nonvolatile memory using a temperature input. 944, Claim 1 (“said calibration control circuit interfaces with said temperature input and said load voltage input to calibrate said calibration data stored in said nonvolatile memory.”). If all calibration data must relate the sense outputs and droop outputs with temperature, then calibrating said calibration data by interfacing with said temperature input would be superfluous. *Hayward Indus., Inc. v. Pentair Water Pool and Spa, Inc.*, 722 Fed. Appx. 1049, 1051, 2016 WL 1270197 (Fed. Cir. Feb. 2, 2018) (non-precedential) (construing drive to mean “variable speed drive” would render superfluous part of dependent claim reciting “wherein the drive is a variable speed drive”).

Plaintiffs’ proposed construction gives proper weight to this limitation. Intel’s proposed construction does not and should be rejected.

D. “calibration control circuit”

Claim Term To Be Construed	Plaintiffs’ Proposed Construction	Intel’s Proposed Construction
“calibration control circuit”	Plain meaning. Alternatively: Circuitry configured to set or adjust calibration data for use in the control of a regulator circuit.	Circuit that calibrates current sensing circuitry and a droop function over a range of temperatures.

1. Plaintiffs' Construction is Consistent with the Intrinsic Evidence

Calibration control circuit need not be construed as its plain meaning is clear from the description of it in claim 1. The calibration control circuit is circuitry that includes a controller, sense outputs, droop outputs, load voltage input and temperature input, and an interface with non-volatile memory that stores calibration data.

However, if this Court finds it necessary to construe this term, consistent with the intrinsic evidence, calibration control circuit should be construed as circuitry configured to set or adjust calibration data for use in the control of a regulator circuit.

The '944 Patent discloses that a calibration control circuit sets and/or adjusts calibration data in order to control a regulator circuit. For example, it is clear from the surrounding claim language that a calibration control circuit can adjust calibration data to control a voltage regulator circuit. 944, Claim 1 (“said calibration control circuit interfaces . . . to calibrate said calibration data stored in said nonvolatile memory.”). Likewise, by calibrating the calibration data that is stored in nonvolatile memory, the calibration control circuit may adjust the sense and droop output settings and/or set the calibration data to further control a regulator circuit. *See* 944, 2:34-36 (“the calibration control circuit adjusts the sense outputs and the droop outputs according to data stored in the nonvolatile memory.”); 944, 6:19-23 (“The calibration control circuit also interfaces with the temperature input and the load voltage input to calibrate the calibration data which may be stored in nonvolatile memory.”).

Further, a calibration control circuit may also set the calibration data to control the regulator circuit. For example, using calibration data stored in nonvolatile memory, the calibration control circuit “may set the sense output and the droop output of the calibration control circuit according to the calibrated data.” 944, 8:24-33. *See also* 944, 9:23-30 (“The calibration control circuit

controls the adjustments to the droop amplifier via the droop output 550 and the sense amplifiers via sense outputs 530.”); DeRouin Decl. (Ex. A), p. 5 (“Once all the phases are calibrated, then the circuit will use the calibration information at power up to readjust itself for accuracy.”).

Calibration control circuit does not require construction, because claim 1 describes it clearly. However, if it is to be construed, then consistent with the intrinsic evidence, calibration control circuit should be construed as circuitry configured to set or adjust calibration data for use in the control of a regulator circuit.

2. Intel’s Construction is Improperly Limiting

Intel’s proposed construction should be rejected for being inconsistent with the intrinsic evidence. As discussed above, a calibration control circuit is not required to calibrate current sensing circuitry (*see supra* B) or to calibrate a droop function (*see supra* A). For example, requiring that the calibration control circuit calibrate current sensing circuitry and a droop function would improperly read preferred embodiments out of the claim. *See, e.g.*, 944, 8:59-62, Fig. 1 (showing a current feedback loop with an adjustable sense amplifier current that is separate from the current sensing circuitry); 944, 9:50-52 (“adjusting the droop amplifier 180 may be equivalent to adjusting the reference voltage.”). It is improper to incorporate limitations that read out these embodiments. *See Kaneka Corp.*, 790 F.3d at 1304 (“A claim construction that excludes a preferred embodiment is ‘rarely, if ever, correct.’”) (citation omitted).

Further, as will be discussed in more detail below, a calibration control circuit is not required to change both the sense and droop output settings based on the temperature data, but rather the *combination* of sense and droop outputs *is* adjusted using the temperature data. *See infra* F. *See also*, 944, 5:16-21 (discussing a “near perfect current match across phases of a multiphase regulator” and providing “temperature-independent droop settings”); 944, 8:26-28 (“The

controller then references the memory for stored calibration data that may be associated with the sampled temperature.”); DeRouin Decl. (Ex. A), pp. 5-6 (discussing adding a temperature sensor to phase balanced circuits to adjust the regulator output voltage for temperature variations in current sensing elements).

Given the breath of asserted claim 1 and the surrounding context of the other intrinsic evidence, Intel’s proposed construction is improperly limiting.

E. “load voltage input”

Claim Term To Be Construed	Plaintiffs’ Proposed Construction	Intel’s Proposed Construction
“load voltage input”	Plain meaning. Alternatively: Input to the calibration control circuit that provides load voltage data.	Input to the calibration control circuit that provides the voltage supplied to the load.

1. Plaintiffs’ Construction is Consistent with the Intrinsic Evidence

Load voltage input does not require construction. Its plain meaning is clear and uncomplicated. If the Court finds it necessary to construe this term, consistent with the intrinsic evidence, a load voltage input should be construed as an input to the calibration control circuit that provides load voltage data.

There are many ways for the calibration control circuit to receive an input representing a load voltage of a regulator circuit. For example, “[t]he methods of the present invention may then sample the load voltage input at the interface between the regulator and the load.” 944, 7:43-45. The calibration control circuit may receive this load voltage directly. *See, e.g.*, 944, Fig. 1 (depicting a voltage from the load 165 coupled directly to the calibration control circuit 190). The calibration control circuit may also indirectly receive a representation of the load voltage, such as through intervening circuitry. *See, e.g.*, 944, Fig. 2; 9:44-46 (“The controller samples load voltage input 570 from the regulator circuit in one embodiment via an analog to digital converter with

registered output 670.”). *See also* 944, Claim 13 (“said load voltage input comprises an analog to digital converter with registered output.”). However, in all embodiments, the load voltage input refers to the circuitry for communicating load voltage data and the load voltage data itself. As such, if construed, load voltage input means an input to the calibration control circuit that provides load voltage data.

2. Intel’s Construction is Inconsistent with the Intrinsic Evidence

Intel’s proposed construction should be rejected for being inaccurate and inconsistent with the intrinsic evidence. As discussed above, the load voltage input does not necessarily provide the actual analog voltage supplied to the load as an input to the calibration control circuit.

Intel’s proposed construction again reads out preferred embodiments, such as those embodiments where the calibration control circuit receives data representing the load voltage, not the load voltage itself. *See, e.g.*, 944, Fig. 2 (showing an analog to digital converter). The calibration control circuit may also interface with an external controller to “read the status values of the sample inputs for temperature and load voltage.” 944, 9:54-57. *See also* DeRouin Decl. (Ex. B), Claim 55 (reciting that the “load voltage is measured with external measurement equipment, said output data is created externally, and said output data is transferred to said calibration control circuit.”). Intel’s proposed construction is even at odds with dependent claim 13, which affirmatively recites an analog to digital converter with registered output for receiving data representing the load voltage. 944, Claim 13. Thus the load voltage input does not necessarily provide the actual analog voltage supplied to the load, and a POSITA would not understand load voltage input to require a direct connection between the load and the calibration control circuit. Melvin Decl. (ECF 115-6), ¶ 28.

Accordingly, Intel’s proposed construction is inconsistent with both the intrinsic evidence and the plain meaning of load voltage input.

F. “temperature data is used ... to adjust said sense outputs and said droop outputs”

Claim Term To Be Construed	Plaintiffs’ Proposed Construction	Intel’s Proposed Construction
“temperature data is used ... to adjust said sense outputs and said droop outputs”	Temperature data is a factor in the determination of one or more sense output and droop output settings.	Plain meaning, i.e., the calibration control circuit uses the temperature data to adjust both the sense outputs and the droop outputs.

1. Plaintiffs’ Construction is Consistent with the Intrinsic Evidence

In the context of the ’944 Patent, sense and droop outputs are set as a pair using temperature data received by the calibration control circuit. In this proper context, and consistent with the intrinsic evidence, temperature data is used as a factor in the determination of one or more sense output and droop output settings, adjusted as a pair of output settings.

The intrinsic evidence is clear that temperature data is used to set or adjust a combination of sense and droop output settings, adjusted as a pair of outputs. *See, e.g.*, 944, 5:61-63, 7:46-49. In most embodiments, sense outputs are used to balance phase currents while droop outputs calibrate the regulator circuit to correct for temperature variations. *See, e.g.*, 944, 8:54-58 (“By adjusting the feedback gain of the adjustable sense amplifier 150, variations in the current sense circuit of each phase can be balanced to equalize the load seen by each phase of a multi-phase regulator.”); 944, 8:64-66 (“This adjustable droop amplifier 180 may be used to adjust the droop loss across the current sense circuit 140.”). In these embodiments covered by the asserted claims, only the droop outputs vary based on temperature. *See, e.g.*, 944, 5:16-21 (differentiating between providing an “active current sharing application that can result in near perfect current match across phases of a multiphase regulator” and providing for “temperature-independent droop settings that

can be programmed for specific and changing applications in the field.”); DeRouin Decl. (Ex. A), pp. 5-6 (discussing adding a temperature sensor to phase balanced circuits to adjust the regulator output voltage for temperature variations in current sensing elements). When temperature data is discussed, the sense outputs are *always* paired with the droop outputs. *See* 944, 9:19-22 (“The data received from the temperature sensor 210 may be used to adjust the droop amplifier 180 and the sense amplifiers 150 to regulate the output power over variations in temperature.”).⁶ In this context, the combination of sense and droop outputs is adjusted using temperature data.

Likewise, temperature data is used as a factor in determining one or more sense output and droop output settings. For example, temperature data may be used to reference a combination of sense and droop settings that is stored in memory. *See, e.g.*, 944, 8:26-28 (“The controller then references the memory for stored calibration data that may be associated with the sampled temperature.”).⁷ The calibration control circuit then uses the referenced settings to adjust the sense and droop outputs to the regulator circuit as a pair. 944, 8:28-30 (“Finally the controller may set the sense output and the droop output of the calibration control circuit according to the calibrated data.”). As temperature varies, additional settings may be referenced based on the temperature data accounting for the temperature variations. 944, 8:30-33 (“These steps may be continuously repeated at set intervals of time, repeated across each phase, and in any beneficial and practical order.”).

The intrinsic evidence is also clear that adjusting the combination of sense and droop output settings does not necessarily require changing *both* the sense settings and droop output settings

⁶ *See also* 944, 5:63-65 (“Data may be created corresponding to the temperature *and the droop and sense settings*.”) (emphasis added).

⁷ *See also* 944, 5:63-65 (“Data may be created corresponding to the temperature and the droop and sense settings. This data may then be stored in memory.”).

when temperature changes. In the embodiments discussed above, if sense settings are used to balance phase currents, the sense output settings may not necessarily change when temperature varies. *See, e.g.*, DeRouin Decl. (Ex. A), p. 2 (“The temperature dependency of the droop mechanism can be cancelled by a temperature sensor internal or external to the integrated circuit.”); *Id.* at p. 5 (“Once all the phases are calibrated, then the circuit will use the calibration information at power up to readjust itself for accuracy.”).⁸ In this context, a POSITA would understand the disputed phrase only requires that temperature data to be a factor in changing at least one of the droop and sense outputs, but not necessarily changing both of the outputs concurrently. *See also* Melvin Decl. (ECF 115-5), ¶ 22. Changing one of the sense or droop output settings necessarily adjusts the combination of sense and droop output settings, as claimed.

Thus, consistent with the intrinsic evidence, temperature data is a factor in the determination of one or more sense output and droop output settings.

2. Intel’s Construction is Improperly Limiting

Intel calls its proposal “plain meaning,” but Intel’s addition of the word “both” could cause confusion and improperly narrow the claim scope. To the extent Intel’s proposed construction would require the sense and droop output settings to be adjusted in lockstep, the proposal is inconsistent with the specification. Plaintiffs’ construction, in contrast, plainly and simply conveys the meaning of the phrase in a way that a finder of fact can understand, while remaining faithful to the intrinsic evidence. According to Intel’s proposed definition, the calibration control circuit must always adjust *both* the sense outputs and the droop outputs based on the temperature data,

⁸ *See also* 944, 5:25-30 (“Thus, at power up, the current sensing mechanism is adjusted by the calibration parameters such that the overall gain of the sensing mechanism in all phases may be matched, and the total current across all phases is shared equally regardless of the temperature or the load.”).

which is inconsistent with the intrinsic evidence. *See, e.g.*, 944, 5:16-21, 8:26-28. For example, as discussed above, temperature data may be used to access and adjust the combination of sense and droop output settings. *See* 944, 5:61-63 (“The load voltage and the temperature may be monitored while the droop and sense settings may be adjusted until the load voltage meets the loads specification.”). *See also* 944, 6:31-33 (“The calibration control circuits of this invention may adjust the sense outputs and the droop outputs according to data stored in the nonvolatile memory.”). The sense output settings and temperature data may be stored with associated droop output settings to compensate for temperature variations. *See, e.g.*, DeRouin Decl. (Ex. B), Claim 47 (“creating output data that relates temperature input with sense outputs and temperature data with droop output”). However, nothing in the intrinsic evidence mandates that both sense and droop output settings change based on the temperature data.

G. “said calibration control circuit interfaces with said nonvolatile memory to store calibration data”

Claim Term To Be Construed	Plaintiffs’ Proposed Construction	Intel’s Proposed Construction
“said calibration control circuit interfaces with said nonvolatile memory to store calibration data”	Plain meaning. Alternatively: The calibration control circuit communicates with nonvolatile memory to store calibration data in any memory.	The calibration control circuit writes calibration data into the nonvolatile memory.

1. Plaintiffs’ Construction is Consistent with the Intrinsic Evidence

This phrase need not be construed as its plain meaning is clear and uncomplicated. The dispute between the parties turns on where the calibration control circuit must store calibration data. Looking to the claim language itself, the disputed phrase only states that the calibration control circuit interfaces with nonvolatile memory and can store calibration data. A plain reading of this phrase indicates that the calibration control circuit has the ability to store calibration data,

including storing calibration data read from nonvolatile memory into volatile memory, such as for modifying or updating sense and droop output settings (e.g., as depicted in Fig. 2 of the asserted patent). Other claim language supports this plain reading, including language indicating that calibration data may already be stored in nonvolatile memory to be accessed by the calibration control circuit. *See* 944, Claim 1 (“said nonvolatile memory stores calibration data.”). Thus, if this Court finds it necessary to construe this term, consistent with this plain meaning and the intrinsic evidence, this phrase means that the calibration control circuit communicates with nonvolatile memory to store calibration data in any memory, volatile or nonvolatile.

A deeper look into the intrinsic evidence supports Plaintiffs’ construction. For example, the specification does not mandate that the calibration data be stored in nonvolatile memory. 944, 5:21-25 (“This calibration data is *preferably* stored in nonvolatile memory, where it can be reused, modified, and restored throughout the life of the power supply.”) (emphasis added). The specification also discloses circuitry that interfaces with nonvolatile memory to retrieve calibration data and store the calibration data for use by the calibration control circuit. Specifically, the calibration control circuit includes a controller, such as a processor or a state machine. *See* 944, 9:29-30, Claim 22. Inherent in a state machine or processor is volatile memory in the form of state registers, processor registers and RAM. Melvin Decl. (ECF 115-5), ¶ 25. Reading calibration data from nonvolatile memory for use by a processor or state machine inherently involves the calibration data in a volatile memory. *Id.* Further, the digital to analog converters include registered inputs (944, 9:36-39, Fig. 2), which may also be volatile memory for storing calibration data.

Therefore, in the context of the intrinsic evidence, this phrase simply means that the calibration control circuit communicates with nonvolatile memory to store calibration data in any memory.

2. Intel's Construction is Improperly Limiting

Intel's proposed construction improperly requires that the calibration control circuit writes calibration data into the nonvolatile memory. As discussed above, the intrinsic evidence is clear that this phrase is not limited to only writing to nonvolatile memory. For example, the '944 Patent claims are clear when they recite writing data in nonvolatile memory and when they did not. *Compare*, 944, Claim 1 ("to store calibration data"), *with* 944, Claim 19 ("write to nonvolatile memory"). *See Phillips*, 415 F.3d at 1315 ("[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim."). Intel's proposed construction improperly attempts to limit the asserted claims to include language that was purposefully omitted. *See also* DeRouin Decl. (Ex. B), Claim 47 (reciting "storing said output data in nonvolatile memory" and "storing the created output in nonvolatile memory").

Further, the asserted claims cover embodiments where calibration data is written to nonvolatile memory, and embodiments where calibration data is merely read from nonvolatile memory. For example, Claim 19, which depends from Claim 1, affirmatively recites that an external interface device may write to the nonvolatile memory, not the calibration control circuit. *See* 944, Claim 19 ("said external interface to an external controller allows said external controller to . . . write to nonvolatile memory."). Some embodiments, however, read calibration data that was previously stored in nonvolatile memory and store the data in another memory, such as memory within the state registers, processor registers and RAM of the calibration control circuit. 944, 4:29-33 ("The controller then. [sic] references the memory for stored calibration data that may be associated with the sampled temperature. Finally the controller sets the sense output and the droop output of the calibration control circuit according to the calibrated data."). *See also* 944, 5:23-25

(“This calibration data is preferably stored in nonvolatile memory, where it can be reused, modified, and restored throughout the life of the power supply.”). As such, this phrase is not limited to writing calibration data to nonvolatile memory.

Finally, Intel’s proposed construction is inconsistent with the intrinsic evidence because it requires that the calibration control circuit actually write calibration data into the nonvolatile memory, reading out the interface language from the claim. In some embodiments where calibration data is written into nonvolatile memory, the calibration control circuit need not do the writing. For example, the calibration control circuit can interface with the nonvolatile memory to write calibration data in the nonvolatile memory, such as using an interface to an external controller. *See* 944, 9:54-58 (“The controller 500 also *interfaces* with an external controller that may control the adjustments directly, read the status values of the sample inputs for temperature and load voltage, and to read and write the nonvolatile memory contents.”) (emphasis added).⁹ As such, in some embodiments where calibration data is written to nonvolatile memory, the calibration control circuit may interface with other circuitry, such as an external controller, to write to the nonvolatile memory. Intel’s proposed construction again improperly attempts to read out embodiments covered by the asserted claims.

⁹ *See also* 944, 7:58-59 (“The external controller may create the output data and write it to the nonvolatile memory.”).

H. “said calibration control circuit interfaces with said regulator circuit via said sense outputs, said droop outputs, and said load voltage input”

Claim Term To Be Construed	Plaintiffs’ Proposed Construction	Intel’s Proposed Construction
“said calibration control circuit interfaces with said regulator circuit via said sense outputs, said droop outputs, and said load voltage input”	Plain meaning. Alternatively: The calibration control circuit communicates with the regulator circuit by way of the sense outputs, droop outputs, and load voltage input.	The calibration control circuit communicates with the regulator circuit by receiving the regulator’s output voltage via the load voltage input and by sending adjustments to the regulator via the sense and droop outputs.

1. Plaintiffs’ Construction is Consistent with the Intrinsic Evidence

This phrase need not be construed as its plain meaning is clear and uncomplicated. A plain reading of this phrase requires direct or indirect communication between the calibration control circuit and the regulator circuit using the various outputs. Thus, if this Court finds it necessary to construe this term, consistent with the intrinsic evidence, this phrase should be construed to mean that the calibration control circuit communicates with the regulator circuit by way of the sense outputs, droop outputs, and load voltage input.

Specifically, in some embodiments, the calibration control circuit directly communicates with the regulator circuit by way of the sense outputs, droop outputs, and load voltage input. *See* 944, 7:20-59 (“The calibration control circuits of the present invention may interface with the multiphase regulator by adjusting the sense amplifiers in each phase via the sense outputs. The calibration control circuit may also adjust the droop amplifier via the droop output. Further, the calibration control circuit may monitor the load voltage output of the current sense circuit via the load voltage input. The calibration control circuit may adjust the error amplifier.”). However, in other embodiments, the calibration control circuit may indirectly communicate with the regulator circuit through intervening circuitry, such as digital to analog converters or an external interface.

See, e.g., 944, 9:33-40 (“These sense outputs 530 in one embodiment interface with the adjustable sense amplifiers via a digital to analog converter with registered input 510, and an amplifier 505. Likewise the droop output 550 from the controller 500 in one embodiment interfaces with the adjustable droop amplifier via a digital to analog converter with registered input 600 and an amplifier 640.”). *See also* 944, Fig. 2.¹⁰ Thus, the intrinsic evidence supports that this phrase should be construed to mean that the calibration control circuit communicates with the regulator circuit by way of the sense outputs, droop outputs, and load voltage input.

2. Intel’s Construction is Improperly Limiting

Intel’s proposed construction is improper because it requires that the calibration control circuit must receive a regulator’s actual output voltage. As discussed above, the load voltage input does not necessarily provide the actual sensed analog voltage supplied to the load to the calibration control circuit. *See supra* E.

For example, there are many ways for the calibration control circuit to receive an input representing a load voltage of a regulator circuit. *See, e.g.*, 944, 7:43-45; 944, Fig. 1 (depicting a voltage from the load 165 coupled directly to the calibration control circuit 190); DeRouin Decl. (Ex. A), p. 5 (“The output of the power supply is measured compared at two different temperatures.”); 944, Fig. 2; 9:44-46 (“The controller samples load voltage input 570 from the regulator circuit in one embodiment via an analog to digital converter with registered output 670.”). As such, if construed, this phrase does not require that calibration control circuit actually receive the regulator’s output voltage via the load voltage input.

¹⁰ *See also* 944, 9:54-58 (“The controller 500 also interfaces with an external controller that may control the adjustments directly, read the status values of the sample inputs for temperature and load voltage, and to read and write the nonvolatile memory contents.”).

VI. CONCLUSION

Plaintiffs' proposed constructions are consistent with the breadth of the asserted claim language read in the context of the specification and other intrinsic evidence. For the reasons discussed above, the Court should adopt Plaintiffs' proposed constructions.

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